

REMARKS

The claims now pending in the application are Claims 1 to 40, the independent claims being Claims 1, 6, 11, 18, 25, 30 and 37 to 40. Claims 1, 6, 11, 18, 25, 30 and 37 to 40 have been amended herein.

In the Official Action dated April 7, 2004, Claims 1 to 40 were rejected under 35 U.S.C. § 103(a), as unpatentable over U.S. Patent No. 5,973,734 (Anderson). Reconsideration and withdrawal of the rejection respectfully are requested in view of the above amendments and the following remarks.

The rejection of the claims over the cited art is respectfully traversed. Nevertheless, without conceding the propriety of the rejections, Claims 1, 6, 11, 18, 25, 30 and 37 to 40 have been amended herein more clearly to recite various novel features of the present invention, with particular attention to the Examiner's comments. Support for the proposed amendments may be found in the original application. No new matter has been added.

Independent Claims 1, 6 and 37 as currently amended are directed to an output control arrangement that controls output of image data imaged by an image input unit in which a display is controlled so that image data is displayed on a display unit. The display control compares aspect ratios between a thumbnail image and a main image in the image data and performs control according to the comparison result so that the thumbnail image is used as display data to be displayed on the display unit in case the aspect ratios are the same and the main image is used as the display data in case the aspect ratios are different.

Independent Claims 25 and 39 as currently amended are directed to an output control arrangement that controls output of image data imaged by an image input unit in which image data is read and display is controlled to display the read image data on a display unit. The formed display data is output on the display unit. The display control compares aspect ratios between a thumbnail image and a main image in the read image data and performs control

according to the comparison result so that the thumbnail image is used as display data on the display unit in case the aspect ratios are the same and the main image is used as the display data in case the aspect ratios are different.

In Applicant's view, Anderson discloses an arrangement for correcting the aspect ratio of an image captured by a digital camera. The arrangement includes determining if the image requires cropping by comparing a thumbnail image aspect ratio with the aspect ratio of a screen on which the thumbnail is to be displayed, decompressing the image, and cropping the image if the image required cropping. The image is then provided to a display. The arrangement may also include cropping an image to a predetermined shape and providing the data to a display buffer.

According to the invention defined in Claims 1, 6, 25, 37 and 39 as currently amended, the aspect ratios between a thumbnail image and a main image in the image data imaged by input image means are compared. Display is controlled according to the comparison result to display the thumbnail image data in case the aspect ratios of the thumbnail image and the main image are the same and to display the main image in the image data in case the aspect ratios are different. Advantageously, the displayed image has an aspect ratio that corresponds exactly to the aspect ratio of the main image in the image data imaged by the image input means to improve viewing by the user.

Anderson, as disclosed at lines 40 and 41 of column 12, teaches that the small thumbnails 700 are cropped to a standard square size and as clearly disclosed from line 64 of column 12 to line 17 of column 13 with respect to Fig. 12 teaches "the image height and width (of the image to be displayed in playback) are stored and the width is divided by the height, or vice versa, to obtain the image aspect ratio. It is then determined if the image aspect ratio is the same as the aspect ratio for the LCD screen 402 via step 912. If the image aspect ratio is the same as the LCD aspect ratio, then the screennail image 608 is decompressed and resized via step 914.

The lower resolution scrennail will then be displayed via step 920. If, however, the image aspect ratio does not match the LCD aspect ratio, then the required crop is determined in step 916. For example, if the image has an aspect ratio of 3:2 and the LCD screen 402 has an aspect ratio of 4:3, then the correct crop is one in which the 3:2 image is cropped to a 4:3 aspect ratio. If the image is a portrait image, for example having an aspect ratio of 3:4, then the correct crop is simply resizing the image so that the height of the portrait image is the same as the height of the LCD screen 402. Once the correct crop is determined, the scrennail image 608 is decompressed, resized, and cropped via step 918. The scrennail is then displayed via step 920."

Accordingly, the Anderson disclosure only teaches square thumbnails and comparison of scrennail aspect ratios with LCD aspect ratios and correcting the aspect ratio by decompressing, resizing and cropping with respect to the LCD screen aspect ratio but is devoid of any suggestion of comparing the aspect ratios between a thumbnail image and a main image in the image data imaged by image input means and then displaying the thumbnail image if the aspect ratios are the same or displaying the main image of the image data input by the image input means if the aspect ratios are different as in Claims 1, 6, 25, 37 and 39. It is not seen that Anderson which only corrects the aspect ratio of the scrennail by cropping or resizing the scrennail for display based on the aspect ratio of the LCD display screen could possibly suggest the feature of Claims 1, 6, 25, 37 and 39 of comparing aspect ratios and then displaying the thumbnail image if aspect ratios are the same and displaying the main image of the image data input by the image input means if the aspect ratios are different. Accordingly, it is believed that Claims 1, 6, 25, 37 and 39 are completely distinguished from Anderson and are allowable.

Independent Claims 11, 18 and 38 as currently amended are directed to an output control arrangement that controls output of image data imaged by an image input unit in which display is controlled to display the image data on a display unit. The display control compares aspect ratios between a thumbnail image and a main image in the image data and performs

control according to the comparison result so that the thumbnail image is used as display data to be displayed on the display unit in case the aspect ratios are the same and the thumbnail image is cut off to have the aspect ratio of the main unit and used as the display data in case the aspect ratios are different.

Independent Claims 30 and 40 as currently amended are directed to an output control arrangement that controls output of image data imaged by an image input unit in which image data is read in and display is controlled to display the read image data on a display unit. Displayed data is formed to be displayed on the display unit according to an instruction of the display control. The formed display data is output on the display unit. The display control compares aspect ratios between a thumbnail image and a main image in the read image data and performs control in accordance with the comparison result so that the thumbnail image is used as display data to be displayed on the display unit in case the aspect ratios are the same and the thumbnail image is cut off to have the aspect ratio of the main image and used as the display data in case the aspect ratios are different.

It is a feature of the invention defined in Claims 11, 18, 30, 38 and 40 that a display control controls to use thumbnail image of image data imaged by image input means as display data to be displayed if the aspect ratio of the thumbnail image is the same as the main image and controls to cut off the thumbnail image to have the aspect ratio of the main image to use as the display data if the aspect ratio of the thumbnail is different than the main image of the data imaged by the image input means. As discussed with respect to Claims 1, 6, 25, 37 and 39, Anderson at lines 41 and 42 of column 12 only discloses cropping small thumbnails to a standard square size and at from line 64 of column 12 to line 17 of column 13 cropping the scrennail image to change its aspect ratio to be the same as the aspect ratio of the LCD display screen if the aspect ratio of the scrennail is different from that of the LCD screen. As a result, there is no comparison of the aspect ratio of the thumbnail image with the aspect ratio of the main image of

image data imaged by image input means and no cutoff of the thumbnail image to be the same as that of the main image in Anderson. Accordingly, it is not seen that Anderson's standard square cropping of thumbnail images or Anderson's cropping of a scrennail image to have its aspect ratio be the same as the aspect ratio of the LCD display screen could possibly teach or suggest the cut-off of the thumbnail image to have the same aspect ratio as the main image of image data imaged by image input means in case the aspect ratios of the thumbnail image and the main image of image data imaged by image input means are different. It is therefore believed that Claims 11, 18, 30, 38 and 40 are completely distinguished from Anderson and are allowable.

For the above reasons, Applicant submits that independent Claims 1, 6, 11, 18, 25, 30 and 37 to 40 are allowable over the cited art.


Claims 2 to 5, 7 to 10, 12 to 17, 19 to 24, 26 to 29 and 31 to 36 depend from Claims 1, 6, 11, 18, 25 and 30, respectively, and are believed allowable for the same reasons. Moreover, each of these dependent claims recites additional features in combination with the features of its respective base claim, and is believed allowable in its own right. Individual consideration of the dependent claims respectfully is requested.

Applicant requests that the present Amendment be entered under 37 CFR § 1.116. Applicant submits that the present amendments merely are minor or formal in nature, and reduce the number of issues for consideration. Applicant believes the present Amendment was necessitated by the outstanding Official Action, and submits that the present amendments were not previously made because Applicant believes the prior claims are allowable.

Applicant believes that the present Amendment is responsive to each of the points raised by the Examiner in the Official Action, and submit that the application is in allowable form. Favorable consideration of the claims and passage to issue of the present application at the Examiner's earliest convenience earnestly are solicited.

Applicant's attorney, C. Phillip Wrist, may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,



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